

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with David Plat on March 27, 2009.

REPLACE Claims 1-84 with claims 1-84 amended by examiner (marked up) set forth below:

1. (Currently amended) A computer-readable storage medium with computer-readable instructions, the computer-readable storage medium comprising:

instructions for an operating system, the operating system comprising a shell and a kernel, the kernel of the operating system including a database management program and a file system, and the file system is integrated with the database management program ~~a file system integrated with a database management program~~, the operating system configured to store data in the file system as file streams, and generate Items associated with the file streams in the database management program, the Items interconnected by a plurality of Relationships managed by said database management program of the operating system, each of said Items having a boundary comprising an item type, applicable subtype information, complex type properties and extensions if any, and a list of the other Items owned by the Item and paths to the file streams stored in the file system, further wherein the list of other Items owned by the Item identifies other Items the Item extends an owning relationship to, further wherein an Item that extends an owning relationship controls at least the life time of the relationship; and

instructions for the database management program of the operating system to generate the owning relationship extending from a first Item to a second Item, wherein an

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owning relationship extending from the first Item to the second Item denotes to said database management program of the operating system that a file stream associated with said second Item is publicly accessible to said first Item, and a lack of an owning relationship extending back from said second Item to said first Item denotes to said database management program of the operating system that a file stream associated with said first Item is inaccessible to said second Item.

2. (Canceled)

3. (Currently amended) The computer-readable storage medium of claim 1 wherein the Relationship from said first Item to said second Item logically denotes in said database management program of the operating system that said second Item is public and accessible to said first Item.

4. (Currently amended) The computer-readable storage medium of claim 1 wherein said first Item is an Item Folder.

5. (Currently amended) The computer-readable storage medium of claim 4 wherein said second Item is an Item Folder.

6. (Original) The computer-readable storage medium of claim 4 wherein said second Item is a Category.

7. (Currently amended) The computer-readable storage medium of claim 4 wherein said second Item is an Item that is not an Item Folder or a Category.

8. (Currently amended) The computer-readable storage medium of claim 1 wherein said first Item is a Category.

9. (Currently amended) The computer-readable storage medium of claim 8 wherein said second Item is an Item Folder.

10. (Currently amended) The computer-readable storage medium of claim 8 wherein said second Item is a Category.

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11. (Currently amended) The computer-readable storage medium of claim 8 wherein said second Item is an Item that is not an Item Folder or a Category.

12. (Currently amended) The computer-readable storage medium of claim 1 wherein said first Item is an Item that is not an Item Folder or a Category.

13. (Currently amended) The computer-readable storage medium of claim 12 wherein said second Item is an Item Folder.

14. (Currently amended) The computer-readable storage medium of claim 12 wherein said second Item is a Category.

15. (Currently amended) The computer-readable storage medium of claim 12 wherein said second Item is not an Item Folder or a Category.

16. (Currently amended) The computer-readable storage medium of claim 1 wherein said second Item is an Item Folder.

17. (Currently amended) The computer-readable storage medium of claim 1 wherein said second Item is a Category.

18. (Currently amended) The computer-readable storage medium of claim 1 wherein said second Item is an Item that is not an Item Folder or a Category.

19-32. (Canceled)

33. (Currently amended) The computer-readable storage medium of claim 12 wherein said second Item has a Relationship to said first Item.

34. (Currently amended) The computer-readable storage medium of claim 33 wherein said Relationship from said first Item to said second Item logically denotes in said database management program of the operating system that the file stream associated with said second Item is public and accessible to said first Item, and wherein said Relationship from said second Item to said first Item logically denotes in said database

management program of the operating system that said file stream associated with the first Item is public and accessible to said second Item.

35-38. (Canceled)

39. (Currently amended) The computer-readable storage medium of claim 33 wherein said first Item is a Category.

40. (Currently amended) The computer-readable storage medium of claim 39 wherein said second Item is an Item Folder.

41. (Currently amended) The computer-readable storage medium of claim 39 wherein said second Item is a Category.

42. (Currently amended) The computer-readable storage medium of claim 39 wherein said second Item is an Item that is not an Item Folder or a Category.

43. (Currently amended) The computer-readable storage medium of claim 33 wherein said first Item is an Item that is not an Item Folder or a Category.

44. (Currently amended) The computer-readable storage medium of claim 43 wherein said second Item is an Item Folder.

45. (Currently amended) The computer-readable storage medium of claim 43 wherein said second Item is a Category.

46. (Currently amended) The computer-readable storage medium of claim 43 wherein said second Item is not an Item Folder or a Category.

47. (Currently amended) The computer-readable storage medium of claim 1 wherein each Item from among said Items has a Relationship to at least one other Item.

48. (Currently amended) The computer-readable storage medium of claim 1 wherein a subset of Items comprise Item Folders.

49. (Currently amended) The computer-readable storage medium of claim 1 wherein a subset of Items comprise Categories.

50. (Currently amended) The computer-readable storage medium of claim 1 wherein a subset of Items comprise Items that are not Item Folders or Categories.

51. (Currently amended) A computer system, the computer system comprising:
hardware including a computer readable storage medium;
instructions for an operating system stored in the computer readable storage medium, the operating system configured to manage the hardware, the operating system comprising a shell and a kernel. the kernel of the operating system including a database management program and a file system and the file system is integrated with the database management program ~~a file system integrated with a database management program, a first portion of the operating system configured to operate in a user mode and a second portion of the operating system configured to operate in a kernel mode;~~
the operating system further configured to store data in the file system as file streams, and generate Items associated with the file streams in the database management program of the operating system, the Items interconnected by Relationships, each of said Items having a boundary comprising an item type, applicable subtype information, complex type properties and extensions if any, and a list of the other Items owned by the Item and paths to the file streams stored in the file system, further wherein the list of other Items owned by the Item identifies other Items the Item extends an owning relationship to, further wherein an Item that extends an owning relationship controls at least the life time of the relationship; and
the database management program of the operating system configured to generate an owning relationship extending from a first Item to a second Item, wherein the owning relationship extending from the first Item to the second Item denotes to said database management program of

the operating system that a file stream associated with said second Item is publicly accessible to said first Item, and a lack of an owning Relationship extending back from said second Item to said first Item denotes to said database management program of the operating system that a file stream associated with said first Item is inaccessible to said second Item,

52. (Canceled)

53. (Currently amended) The computer system ~~database management program of the operating system~~ of claim 51 wherein the Relationship from said first Item to said second Item logically denotes in said database management program of the operating system that said file stream associated with the second Item is public and accessible to said first Item.

54. (Currently amended) The computer system ~~database management program of the operating system~~ of claim 51 wherein said first Item is an Item Folder.

55. (Currently amended) The computer system ~~database management program of the operating system~~ of claim 51 wherein said first Item is a Category.

56. (Currently amended) The computer system ~~database management program of the operating system~~ of claim 51 wherein said first Item is an Item that is not an Item Folder or a Category.

57. (Currently amended) The computer system ~~database management program of the operating system~~ of claim 51 wherein said second Item is an Item Folder.

58. (Currently amended) The computer system ~~database management program of the operating system~~ of claim 51 wherein said second Item is a Category.

59. (Currently amended) The computer system ~~database management program of the operating system~~ of claim 51 wherein said second Item is an Item that is not an Item Folder or a Category.

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60.-61. (Canceled)

62. (Currently amended): The computer system database management program of the operating system of claim 51 wherein said second Item has a Relationship to said first Item.

63. (Currently amended) The computer system database management program of the operating system of claim 62 wherein said Relationship from said first Item to said second Item logically denotes in said database management program of the operating system that said file stream associated with the second Item is public and accessible to said first Item, and wherein said Relationship from said second Item to said first Item logically denotes in said database management program of the operating system that said file stream associated with the first Item is public and accessible to said second Item.

64. (Currently amended) The computer system database management program of the operating system of claim 51 wherein each Item from among said Items has a Relationship to at least one other Item.

65. (Currently amended) The computer system database management program of the operating system of claim 51 wherein a subset of Items comprise Item Folders.

66. (Currently amended) The computer system database management program of the operating system of claim 51 wherein a subset of Items comprise Categories.

67. (Currently amended) The computer system database management program of the operating system of claim 51 wherein a subset of Items comprise Items that are not Item Folders or Categories.

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68. (Currently amended) A method for organizing data in a computer system, the method comprising:

receiving, from an application operating in user space of an operating system, a request to save data to a file system, wherein the operating system comprises a shell and a kernel, the kernel of the operating system including a database management program and the file system and the file system is integrated with the database management program ~~the file system and the file system is integrated with a database management program;~~

saving, by the operating system, the data to the file system as file stream;

generating, by the database management program, an Item, associated with the file stream each Item stored in the database management program having a boundary comprising an item type, applicable subtype information, complex type properties and extensions if any, and a list of the other Items owned by the Item and paths to associated file streams stored in the file system, further wherein the list of other Items owned by the Item identifies other Items the Item extends an owning relationship to, further wherein an Item that extends an owning relationship controls at least the life time of the relationship; and

generating, by the database management program, an owning relationship extending from a first Item to a second Item, wherein the owning relationship extending from the first Item to the second Item denotes to said database management program that a file stream said second Item is publicly accessible to said first Item, and a lack of an owning relationship extending back from said second Item to said first Item denotes to said database management program that a file stream said first Item is inaccessible to said second Item.

69. (Canceled)

70. (Currently amended) The method of claim 68 further comprising: ~~the step of~~

denoting in database management program that, due to said Relationship, said second Item is public and accessible to said first Item.

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71. (Previously presented) The method of claim 68 wherein said first Item is an Item Folder.

72. (Previously presented) The method of claim 68 wherein said first Item is a Category.

73. (Previously presented) The method of claim 68 wherein said first Item is an Item that is not an Item Folder or a Category.

74. (Previously presented) The method of claim 68 wherein said second Item is an Item Folder.

75. (Previously presented) The method of claim 68 wherein said second Item is a Category.

76. (Previously presented) The method of claim 68 wherein said second Item is an Item that is not an Item Folder or a Category.

77.-78. (Canceled)

79. (Currently amended) The method of claim 68 further comprising: ~~the step of~~ extending a Relationship from said second Item to said first Item

80. (Previously presented) The method of claim 79 wherein said Relationship from said first Item to said second Item logically denotes in said database management program that said file stream associated with the second Item is public and accessible to said first Item, and wherein said Relationship from said second Item to said first Item logically denotes in said database management program that said file stream associated with the first Item is public and accessible to said second Item.

81. (Original) The method of claim 68 wherein each Item from among said Items has a Relationship to at least one other Item.

82. (Original) The method of claim 68 wherein a subset of Items comprise Item Folders.

83. (Original) The method of claim 68 wherein a subset of Items comprise Categories.

84. (Original) The method of claim 68 wherein a subset of Items comprise Items that are not Item Folders or Categories.

1. The prior art of record fails to teach or suggest the claimed invention individually or in combination the limitation of "the operating system comprising a shell and a kernel, the kernel of the operating system including a database management program and a file system, and the file system is integrated with the database management program..." as set forth in claim 1, and similarly in claims 51 and 68.
2. The closest prior art, Barney et al. (newly cited), describes an integration of a database into a file management software, and Burger et al. (newly cited) describes a system for interfacing computer application programs written in different languages to a software system. However, neither Barney et al. or Burger et al. teaches or suggests the limitations cited above as being free of any prior art when read in the claims as a whole.

CONCLUSION

1. Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you

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2. For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199. The USPTO's official fax number is 571-272-8300.
 3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Dune Ly, whose telephone number is (571) 272-0716. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.
 4. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo, can be reached on (571) 272-3642.

/Cheyne D Ly/
Primary Examiner, Art Unit 2168